

CALPERS PENSION OUTLOOK USER MANUAL FOR CALPERS.CA.GOV

Version 1 – Release Date June 2020

This user manual is intended to provide instructions on how to use the Pension Outlook tool in calpers.ca.gov. The contents are organized as follows:

Contents

Purpose of Pension Outlook	2
Accessing Pension Outlook	3
Register for an Account	8
Viewing Public Agency Plan Information.....	12
Viewing PERF, Aggregated Public Agency, California State Agency and Schools Pool Information.....	15
Modeling Assumptions.....	17
Years to Project / Projection Period	18
Discount Rate	20
PEPRA Transition Period.....	22
Changing PEPRA Transition Period.....	22
Turning Off PEPRA Transition Period	25
Additional Discretionary Payments (ADP's).....	27
Investment Scenarios	30
Selecting a Random Investment Scenario	30
Entering a User Specified Investment Scenario	33
Submit Button	34
Summary Results.....	35
Funding Results.....	37
Cash Flow Results.....	39
Budgeting Results.....	40
Appendix 1 – Terms and Condition of Use	42

Purpose of Pension Outlook

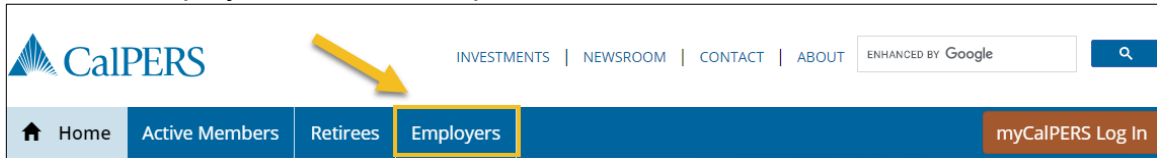
The purpose of Pension Outlook is to assist contracting Public Agencies and Stakeholders with planning and budgeting for pension costs into the future. Pension Outlook provides the Baseline Projections of funded status and employer rates based on the most recent annual actuarial valuation report prepared for a specific plan. Users can vary financial parameters in the application to generate alternative cost scenarios. These variations provide an opportunity to understand the pension cost drivers and potential budget impacts by scenario for that plan.

Please read the disclaimer upon opening the application carefully as CalPERS wants to make sure that the random scenarios included in Pension Outlook or any scenarios developed by the User should not be relied upon to represent the actual future funded status nor the actual future employer contributions. (See Appendix 1 for a screen shot)

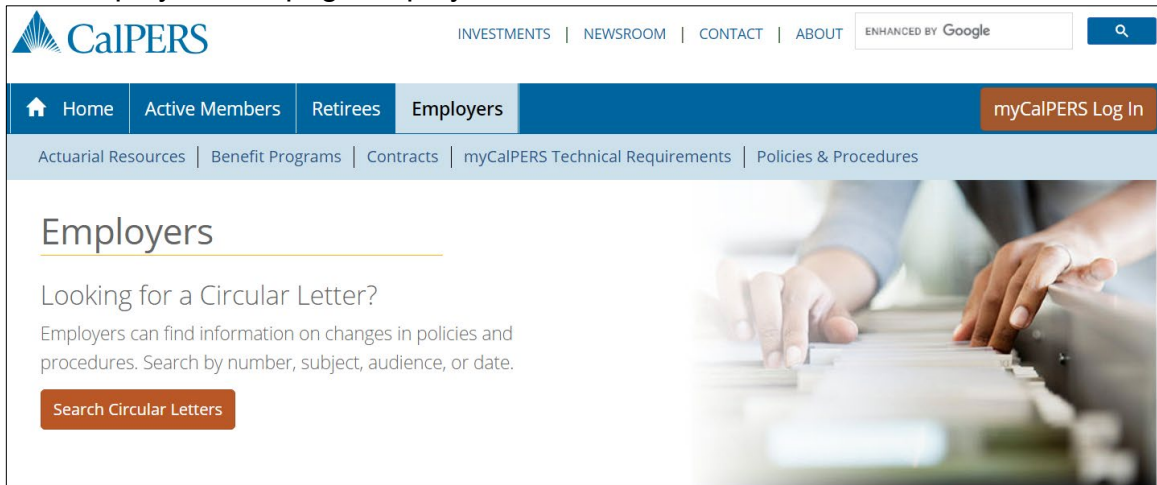
Accessing Pension Outlook

To navigate the Pension Outlook tool in calpers.ca.gov, follow the steps below:

1. Click the Employers tab on the top menu



2. The Employers webpage displays



3. Click the Actuarial Resources link

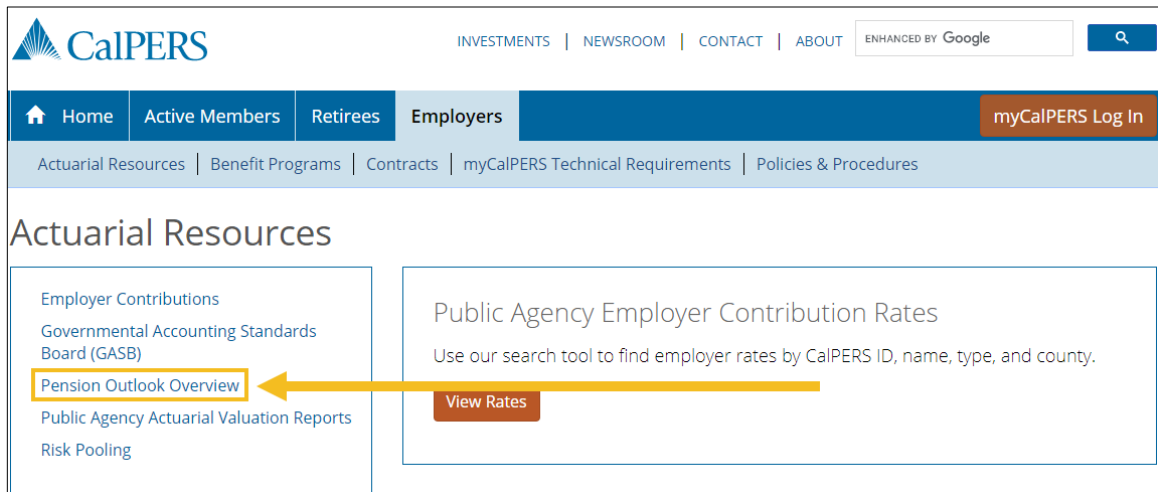


Accessing Pension Outlook (Cont.)

4. The Actuarial Resources webpage displays



5. Click the Pension Outlook Overview link.



Accessing Pension Outlook (Cont.)

6. The Pension Outlook Overview screen displays.

Home > Employers > Actuarial Resources > Pension Outlook Overview

Pension Outlook Overview

Pension Outlook is a tool to help plan and budget pension costs into the future with easy to understand results and charts.

You will be able to view the projected funded status and required employer contributions for pension plans in different potential scenarios for up to 30 years into the future — which will make budgeting more predictable. While Pension Outlook can't predict the future, it can provide valuable planning information based on a variety of possible future scenarios that you select.

Pension Outlook can help you answer specific questions about your plans, including:

- When is my plan expected to increase its funded status?
- What happens to my required contributions in a down market?
- How does the discount rate assumption affect my contributions?
- What is the impact of making an additional discretionary payment to my plan?

How to Get Started

At this time, only state and local public agencies with a **non-pooled plan** (employers with 100+ employees) can use the tool. We anticipate having the tool available for pooled plans (employers with less than 100+ employees) in the late fall of 2020.

Actuarial Resources

- Employer Contributions
- Governmental Accounting Standards Board (GASB)
- Pension Outlook Overview
- Public Agency Actuarial Valuation Reports
- Risk Pooling

Resources

- Pension Outlook Log In

Forms & Publications

- Pension Outlook User Manual (PDF)

7. Click the Pension Outlook Login link.

Home > Employers > Actuarial Resources > Pension Outlook Overview

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- Pension Outlook Overview
- Public Agency Actuarial Valuation Reports
- Risk Pooling

Resources

- Pension Outlook Log In

Forms & Publications

- Pension Outlook User Manual (PDF)

8. The Pension Outlook sign-in screen displays.

The screenshot shows the CalPERS website header with the logo and navigation links: INVESTMENTS | NEWSROOM | CONTACT | ABOUT. A search bar with 'ENHANCED BY Google' is on the right. Below the header is a blue navigation bar with links: Home, Active Members, Retirees, Employers, and a myCalPERS Log In button. Underneath is a light blue bar with links: Actuarial Resources | Benefit Programs | Contracts | myCalPERS Technical Requirements | Policies & Procedures. A breadcrumb trail reads: Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Login. The main heading is 'Pension Outlook'. Below it is a 'Login' section with two input fields: 'Email (required)' and 'Password (required)'. A brown 'Log In' button is below the password field, followed by a blue link 'Forgot Password?'. At the bottom of the login section is the text 'Need an Account?' and a grey 'Register' button.

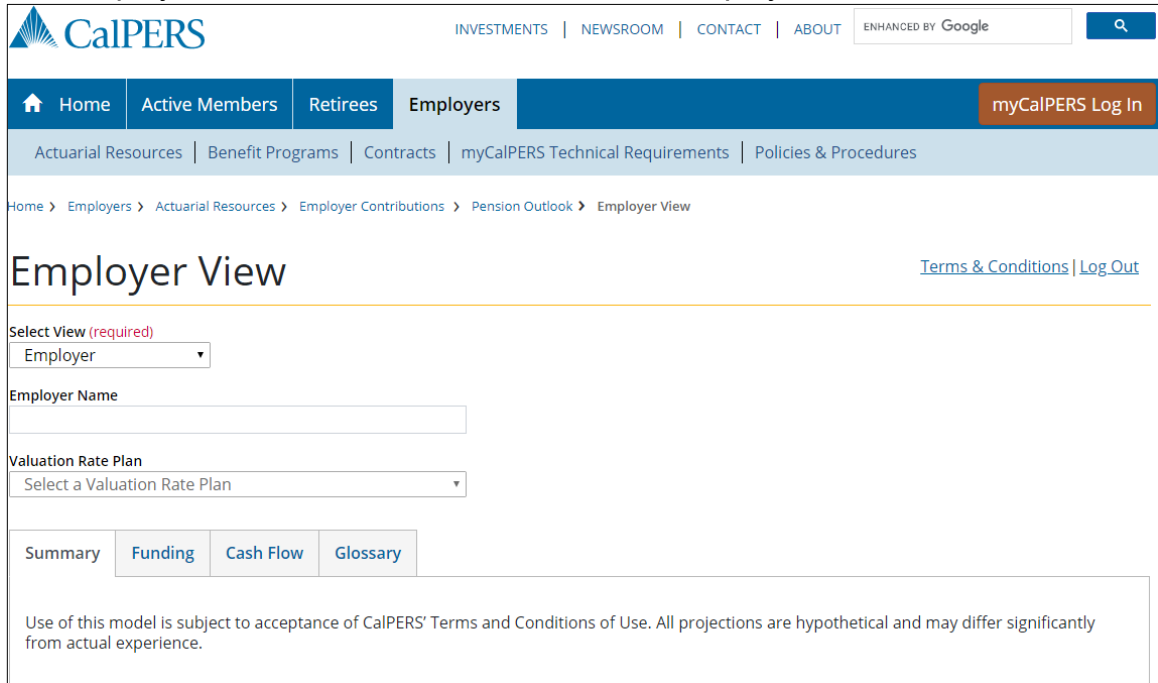
Note: For instructions on registering for an account, see the Register for an Account section.

9. If you've already registered, provide your login information and click the Log In button.

This screenshot is identical to the one above but includes three yellow callout boxes with numbers. Callout 1 points to the 'Email (required)' input field, which contains the text 'email@domain.com'. Callout 2 points to the 'Password (required)' input field, which contains a series of dots. Callout 3 points to the brown 'Log In' button. The rest of the page content remains the same.

Accessing Pension Outlook (Cont.)

10. The Employer View of the Pension Outlook tool displays.



The screenshot displays the CalPERS website's Employer View interface. At the top, the CalPERS logo is on the left, and navigation links for INVESTMENTS, NEWSROOM, CONTACT, and ABOUT are on the right, along with a search bar and 'ENHANCED BY Google'. Below this is a main navigation bar with links for Home, Active Members, Retirees, and Employers (which is highlighted), and a 'myCalPERS Log In' button. A secondary navigation bar lists Actuarial Resources, Benefit Programs, Contracts, myCalPERS Technical Requirements, and Policies & Procedures. A breadcrumb trail shows the path: Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Employer View. The main heading is 'Employer View', with links for Terms & Conditions and Log Out. Below the heading, there is a 'Select View (required)' dropdown menu currently set to 'Employer'. This is followed by an 'Employer Name' text input field and a 'Valuation Rate Plan' dropdown menu set to 'Select a Valuation Rate Plan'. A tabbed interface at the bottom includes 'Summary', 'Funding' (the active tab), 'Cash Flow', and 'Glossary'. A disclaimer at the bottom states: 'Use of this model is subject to acceptance of CalPERS' Terms and Conditions of Use. All projections are hypothetical and may differ significantly from actual experience.'

Register for an Account

To access the Pension Outlook tool, you must register for an account. Registration only needs to occur once. After registration, you can use the email address you provided and password you selected to login to the tool.

1. To register for an account, click the Register button.

The screenshot displays the CalPERS website interface. At the top, the CalPERS logo is on the left, and navigation links (INVESTMENTS | NEWSROOM | CONTACT | ABOUT) and a search bar (ENHANCED BY Google) are on the right. Below this is a blue navigation bar with links: Home, Active Members, Retirees, Employers, and myCalPERS Log In. Underneath is a light blue bar with links: Actuarial Resources | Benefit Programs | Contracts | myCalPERS Technical Requirements | Policies & Procedures. A breadcrumb trail reads: Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Login. The main heading is "Pension Outlook". Below it is a "Login" section with two input fields: "Email (required)" and "Password (required)". A "Log In" button is below the fields, followed by a "Forgot Password?" link. At the bottom, the text "Need an Account?" is followed by a "Register" button. A yellow arrow points to the "Register" button.

2. The Registration Information webpage displays

CalPERS INVESTMENTS | NEWSROOM | CONTACT | ABOUT ENHANCED BY Google

Home Active Members Retirees Employers myCalPERS Log In

Actuarial Resources | Benefit Programs | Contracts | myCalPERS Technical Requirements | Policies & Procedures

Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Registration Information

Registration Information

Please provide all of the requested information.

First Name (required) Last Name (required)

Organization Name (required)

Title (required)
Active Employee

Email (required)

Password (required)
At least 8 characters.
No spaces, case sensitive.
Must have at least 1 uppercase letter, 1 lowercase letter, 1 number.

Confirm Password (required)

Submit Cancel

3. Populate the required fields to register

Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Registration Information

Registration Information

Please provide all of the requested information.

1 First Name (required)

2 Last Name (required)

3 Organization Name (required)

4 Title (required)
Active Employee

5 Email (required)

6 Password (required)
At least 8 characters.
No spaces, case sensitive.
Must have at least 1 uppercase letter, 1 lowercase letter, 1 number.

7 Confirm Password (required)

Submit Cancel

4. Click the Submit button

Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Registration Information

Registration Information

Please provide all of the requested information.

First Name (required)

Last Name (required)

Organization Name (required)

Title (required)
Active Employee

Email (required)

Password (required)
At least 8 characters.
No spaces, case sensitive.
Must have at least 1 uppercase letter, 1 lowercase letter, 1 number.

Confirm Password (required)

Submit

5. A banner appears at the top of the screen, showing that the information was submitted successfully. Check the email account provided for a confirmation email to complete the registration process.

[Home](#) > [Employers](#) > [Actuarial Resources](#) > [Employer Contributions](#) > [Pension Outlook](#) > [Registration Information](#)

Registration Information

Success!

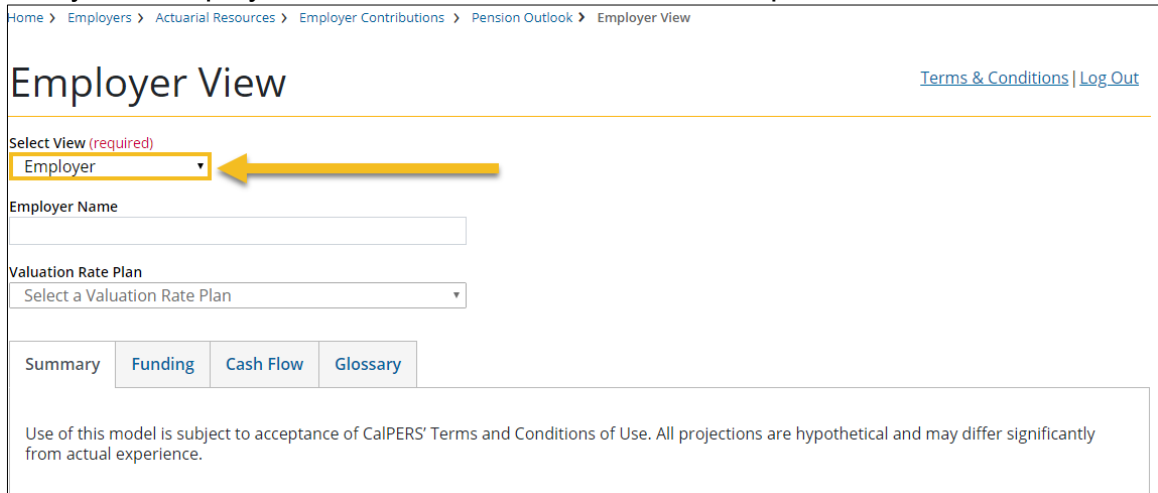
- Please check your email for a confirmation link to complete the registration process.

X

Viewing Public Agency Plan Information

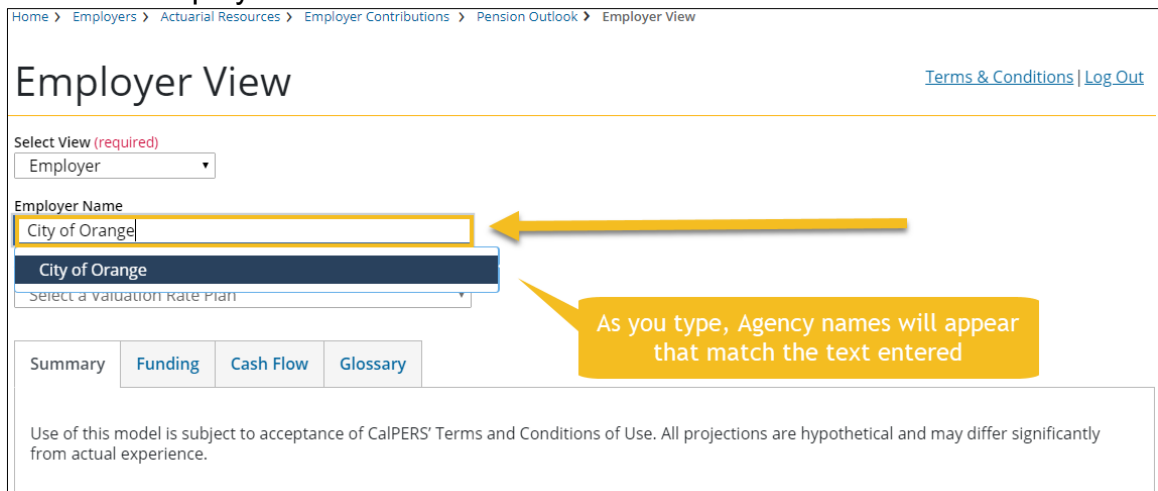
After logging-in, users can select Public Agency plans in Employer View of the Pension Outlook tool. To select a specific Public Agency plan, follow the steps below:

1. Verify that Employer is selected in the Select View drop-down menu



The screenshot shows the 'Employer View' page. At the top, there is a breadcrumb trail: Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Employer View. Below the breadcrumb trail is the title 'Employer View' and links for 'Terms & Conditions' and 'Log Out'. The main content area has a 'Select View (required)' dropdown menu with 'Employer' selected. A yellow arrow points to this dropdown. Below the dropdown is an 'Employer Name' text input field. Below that is a 'Valuation Rate Plan' dropdown menu with 'Select a Valuation Rate Plan' as the placeholder. At the bottom, there are four tabs: 'Summary', 'Funding', 'Cash Flow', and 'Glossary'. A disclaimer at the bottom states: 'Use of this model is subject to acceptance of CalPERS' Terms and Conditions of Use. All projections are hypothetical and may differ significantly from actual experience.'

2. Enter the Employer Name



The screenshot shows the 'Employer View' page with the 'Employer Name' text input field highlighted. A yellow arrow points to the field, which contains the text 'City of Orange'. Below the input field, a dropdown menu is open, showing 'City of Orange' as a suggestion. A yellow callout box with a pointer to the dropdown menu contains the text: 'As you type, Agency names will appear that match the text entered'. The rest of the page, including the breadcrumb trail, title, links, 'Select View' dropdown, 'Valuation Rate Plan' dropdown, tabs, and disclaimer, is the same as in the previous screenshot.

Viewing Public Agency Plan Information (Cont.)

3. The Valuation Rate Plan drop-down menu will populate based on the employer you selected

Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Employer View

Employer View

[Terms & Conditions](#) | [Log Out](#)

Select View (required)
Employer

Employer Name
City of Orange

Valuation Rate Plan
374 - Miscellaneous Plan

4. Select the Valuation Rate Plan you would like to view

Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Employer View

Employer View


[Terms & Conditions](#) | [Log Out](#)

Select View (required)
Employer

Employer Name
City of Orange

Valuation Rate Plan

- 374 - Miscellaneous Plan
- 374 - Miscellaneous Plan
- 375 - Safety Plan



Viewing Public Agency Plan Information (Cont.)

5. Information for the selected Valuation Rate Plan displays

[Home](#) > [Employers](#) > [Actuarial Resources](#) > [Employer Contributions](#) > [Pension Outlook](#) > [Employer View](#)

[Terms & Conditions](#) | [Log Out](#)

Employer View

Select View (required)
Employer

Employer Name
City of Orange

Valuation Rate Plan
375 - Safety Plan

+ Modeling Assumptions

Modeling Assumptions

Economic Assumptions

Details	Baseline
Discount Rate	7.000%
Payroll Growth	2.750%
Inflation Rate	2.500%

Investment Scenario Chosen

Rate	Period
7.000%	1
7.000%	9
7.000%	20

Other Assumptions

Details	Baseline
PEPRA	Yes
Transition Years	15
ADP	No

30 Year Budget

Download the [Fiscal Year Cost and Annual Relative Increase in Cost](#).

Summary | **Funding** | Cash Flow | Glossary

Funded Status and Employer Rates

Valuation Date	Base Funded Status (%)	Base Employer Rate (%)
6/30/18	67.70	56.88
6/30/19	68.50	58.00
6/30/20	69.50	59.00
6/30/21	70.50	60.00
6/30/22	71.50	60.00
6/30/23	72.50	59.50
6/30/24	73.50	59.00
6/30/25	74.50	58.50
6/30/26	75.50	58.00
6/30/27	76.50	57.50
6/30/28	77.50	57.00
6/30/29	78.50	56.00
6/30/30	79.50	55.00
6/30/31	80.50	53.00
6/30/32	81.50	51.00
6/30/33	82.50	49.00
6/30/34	83.50	47.00
6/30/35	84.50	45.00
6/30/36	85.50	43.00
6/30/37	86.50	41.00
6/30/38	87.50	39.00
6/30/39	88.50	37.00
6/30/40	89.50	35.00
6/30/41	90.50	33.00
6/30/42	91.50	31.00
6/30/43	92.50	29.00
6/30/44	93.50	27.00
6/30/45	94.50	25.00
6/30/46	95.50	23.00
6/30/47	96.50	21.00
6/30/48	100.25	12.03

Viewing PERF, Aggregated Public Agency, California State Agency and Schools Pool Information

After logging-in, users can view information for the Public Employees Retirement Fund (PERF), all Public Agency Miscellaneous plans, all Public Agency Safety plans, State of California Plans and/or the Schools Pool in the Pension Outlook tool. To accomplish this, follow the steps below:

1. Select Fund from the Select View drop-down menu

Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Employer View

Employer View

[Terms & Conditions](#) | [Log Out](#)

Select View (required)

Employer
Fund
Employer

Valuation Rate Plan

Select a Valuation Rate Plan

Summary Funding Cash Flow Glossary

Use of this model is subject to acceptance of CalPERS' Terms and Conditions of Use. All projections are hypothetical and may differ significantly from actual experience.

2. The Fund View displays, with the PERF as the default plan

Home > Employers > Actuarial Resources > Employer Contributions > Pension Outlook > Fund View

Fund View

[Terms & Conditions](#) | [Log Out](#)

Select View (required)

Fund

Plan Type (required)

PERF

3. To change plans, select which one you would like to view in Plan Type drop-down menu

Fund View

Select View (required)

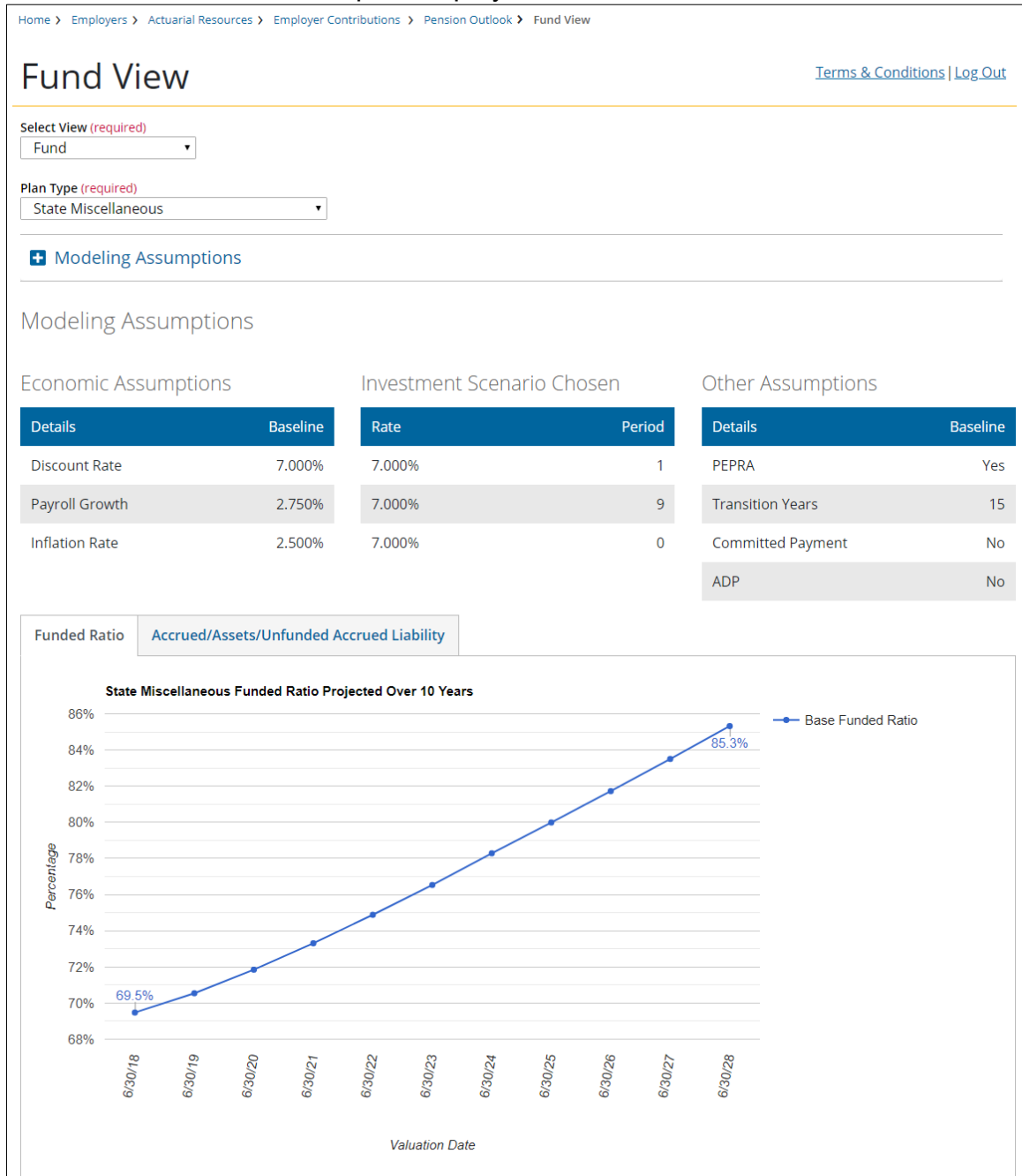
Fund

Plan Type (required)

PERF
PERF
State Miscellaneous
State Peace Officer and Fire Fighters (POFF)
State Safety
State Industrial
California Highway Patrol
Public Agency - Miscellaneous
Public Agency - Safety
Schools

Viewing PERF, Aggregated Public Agency, California State Agency and Schools Pool Information (Cont.)

4. Information for the selected plan displays



Modeling Assumptions

By clicking on the Modeling Assumptions button, the User can select the appropriate financial scenario or click the reset assumptions button to produce the Baseline Projections based on the most recent valuation report. Within this section are the following user specified entries:

The screenshot shows the 'Modeling Assumptions' form with the following fields and callouts:

- 1** Points to the 'Years to Project' radio button group with options 10, 20, and 30 (30 is selected).
- 2** Points to the 'Discount Rate % (required)' text input field containing '7.000'.
- 3** Points to the 'PEPRA' radio button group with options 'Yes' (selected) and 'No', and the 'PEPRA Transition Years' radio button group with options 10, 15 (selected), and 20.
- 4** Points to the 'Additional Discretionary Payment' radio button group with options 'Yes' and 'No' (No is selected).
- 5** Points to the 'Random Investment Scenario' section, which includes a radio button group (No is selected) and a table of Rate % and Number of Years.

Rate % (required)	Number of Years (required)
7.000	1
7.000	9
7.000	20

At the bottom of the form are two buttons: 'Submit' and 'Reset Modeling Criteria'.

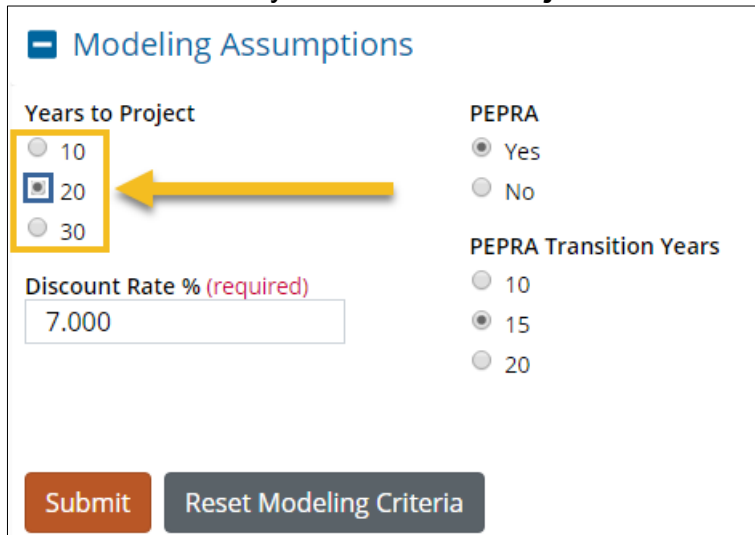
1. Years to Project
2. Discount Rate
3. PEPRA Transition Period
4. Additional Discretionary Payment
5. Investment Scenarios

Additional information about each of these user specified entries can be found in the other sections of this document.

Years to Project / Projection Period

User can choose to project 10, 20 or 30 years. To change the number of years in the projection, follow the steps below:

1. Select the desired years **Years to Project** radio button



Modeling Assumptions

Years to Project

☐ 10

☒ 20

☐ 30

PEPRA

☒ Yes

☐ No

PEPRA Transition Years

☐ 10

☒ 15

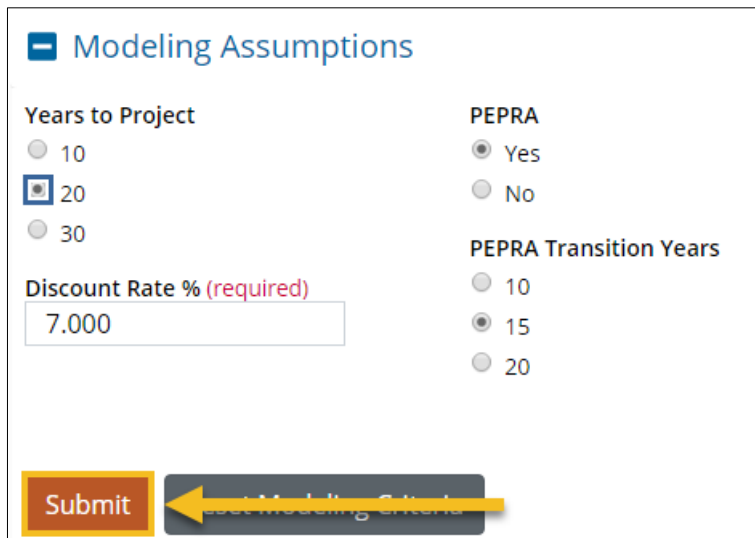
☐ 20

Discount Rate % (required)

7.000

Submit **Reset Modeling Criteria**

2. Click the **Submit** button



Modeling Assumptions

Years to Project

☐ 10

☒ 20

☐ 30

PEPRA

☒ Yes

☐ No

PEPRA Transition Years

☐ 10

☒ 15

☐ 20

Discount Rate % (required)

7.000

Submit **Reset Modeling Criteria**

Years to Project (Cont.)

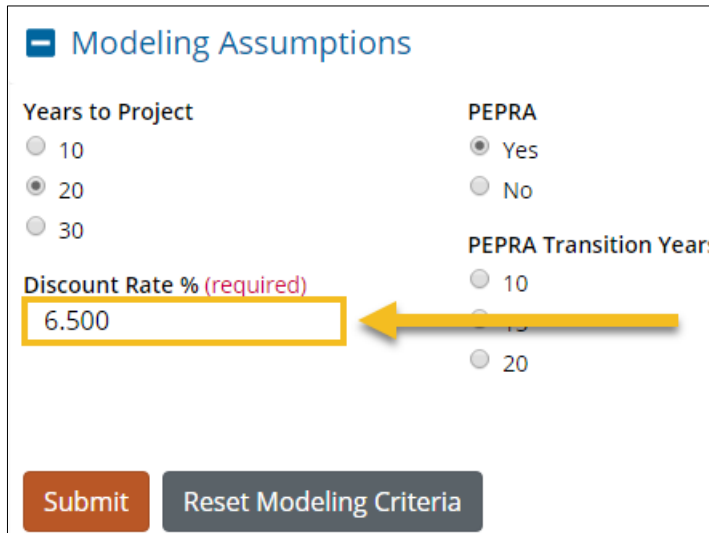
3. The desired number of years displays



Discount Rate

Users can choose to model the impact of different discount rates on the plans funded status or employer contribution rates. Any discount rate between 6% and 8% is available for modeling based on the sensitivity results provided in the most recent actuarial valuation report. Inflation remains static even if a different discount rate is modeled. To model the impact of a different discount rate, follow the steps below:

1. Enter a discount rate into the **Discount Rate %** field



Modeling Assumptions

Years to Project

☐ 10

☒ 20

☐ 30

PEPRA

☒ Yes

☐ No

PEPRA Transition Years

☐ 10

☒ 15

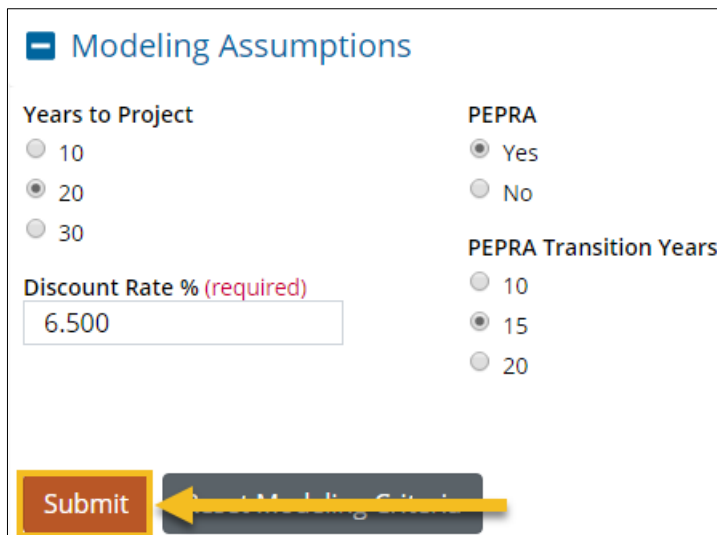
☐ 20

Discount Rate % (required)

6.500

Submit Reset Modeling Criteria

2. Click the **Submit** button



Modeling Assumptions

Years to Project

☐ 10

☒ 20

☐ 30

PEPRA

☒ Yes

☐ No

PEPRA Transition Years

☐ 10

☒ 15

☐ 20

Discount Rate % (required)

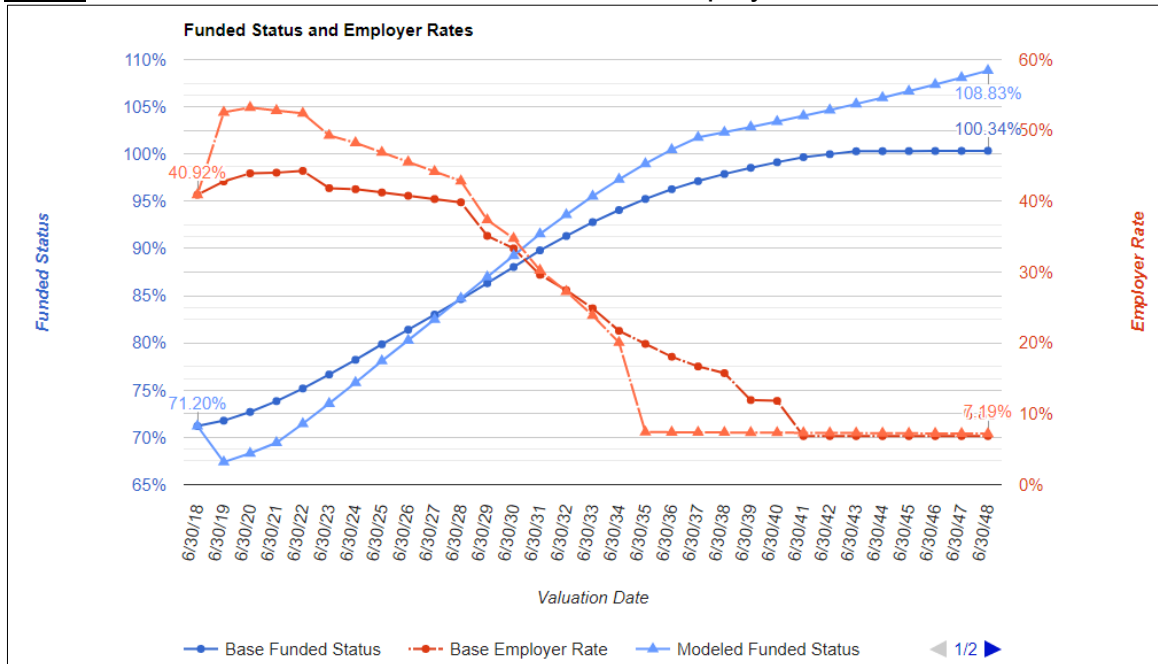
6.500

Submit Reset Modeling Criteria

Discount Rate (Cont.)

3. The desired results display

Note: Both the baseline and new scenario are displayed



PEPRA Transition Period

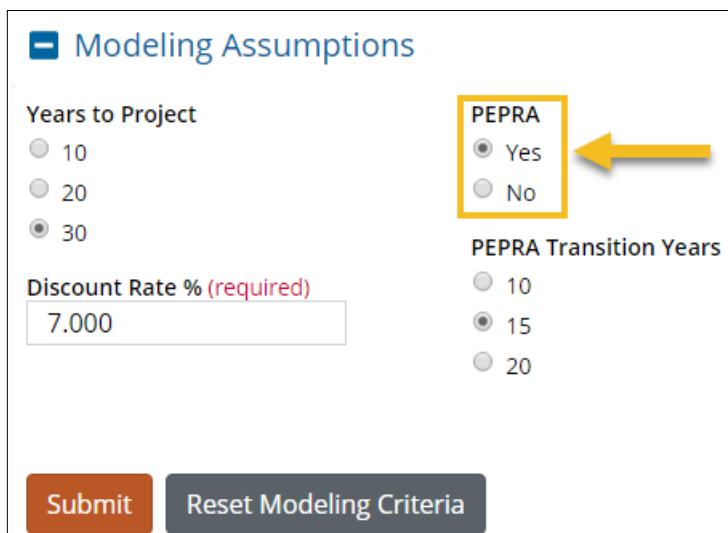
Users can model the reduction in employer normal cost due to the transition of active members in the plan from Classic status to PEPRA status . This reduction can be modeled using 10, 15 or 20 years for the full transition period.

The Baseline projection reflects a PEPRA transition period of 15 years which is roughly the level of turnover observed to date for a typical plan. Plans exhibiting slower turnover should select a PEPRA transition period of 20 years, while those plans with high turnover would be advised to select a PEPRA transition period of 10 years. Users can also turn off the PEPRA Transition Period.

Changing PEPRA Transition Period

To change the modeling of PEPRA Transition Period, follow the steps below:

1. Verify the **Yes** radio button is selected in the PEPRA section



The screenshot shows the 'Modeling Assumptions' form. On the left, under 'Years to Project', the '30' radio button is selected. Below it, the 'Discount Rate % (required)' is set to '7.000'. On the right, under the 'PEPRA' section, the 'Yes' radio button is selected and highlighted by a yellow box, with a yellow arrow pointing to it. Below this, under 'PEPRA Transition Years', the '15' radio button is selected. At the bottom are 'Submit' and 'Reset Modeling Criteria' buttons.

Changing PEPRA Transition Period (Cont.)

2. Select the desired **Transition Years** radio button (if applicable)

Modeling Assumptions

Years to Project

☐ 10

☐ 20

☒ 30

Discount Rate % (required)

7.000

PEPRA

☒ Yes

☐ No

PEPRA Transition Years

☒ 10

☐ 15

☐ 20

Submit **Reset Modeling Criteria**

3. Click the **Submit** button

Modeling Assumptions

Years to Project

☐ 10

☐ 20

☒ 30

Discount Rate % (required)

7.000

PEPRA

☒ Yes

☐ No

PEPRA Transition Years

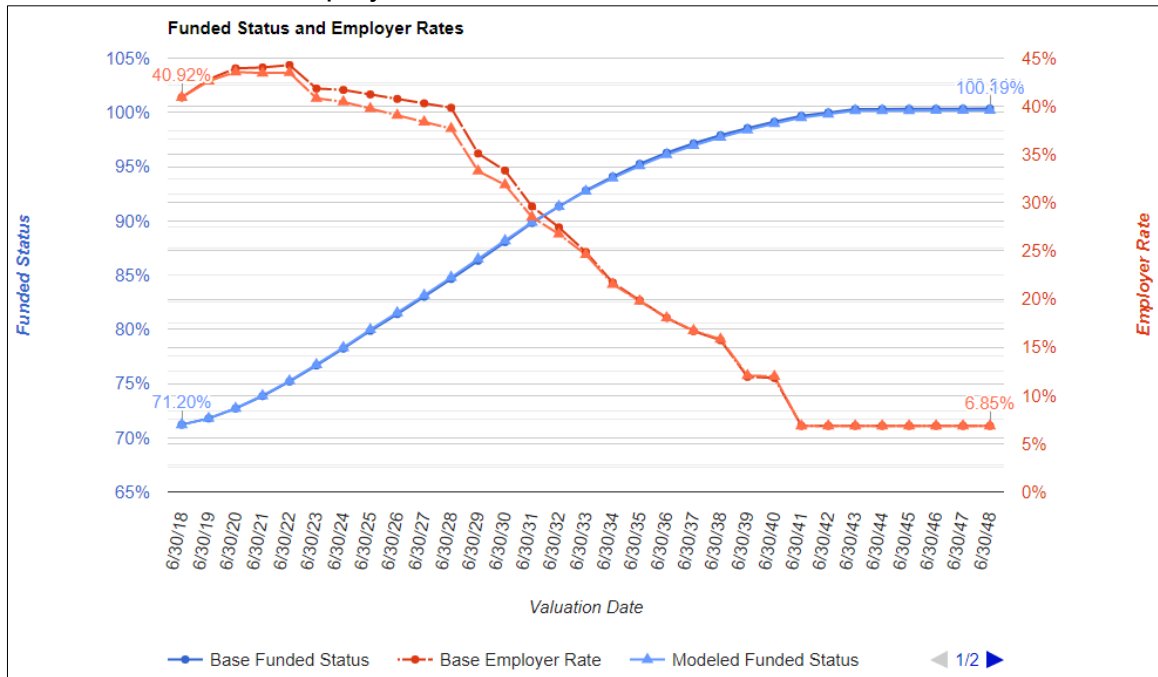
☒ 10

☐ 15

☐ 20

Submit **Reset Modeling Criteria**

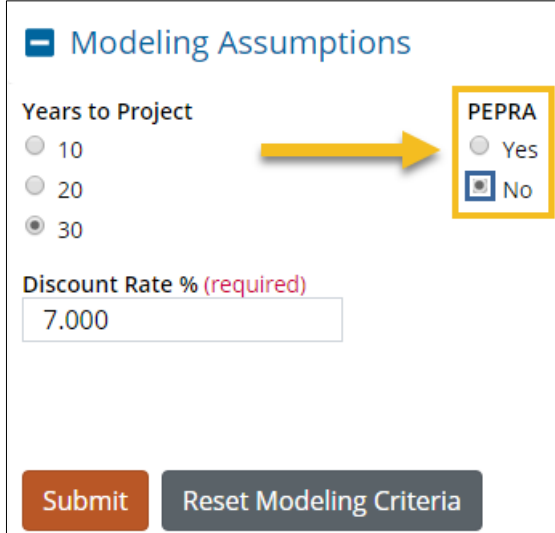
4. The desired results display



Turning Off PEPRA Transition Period

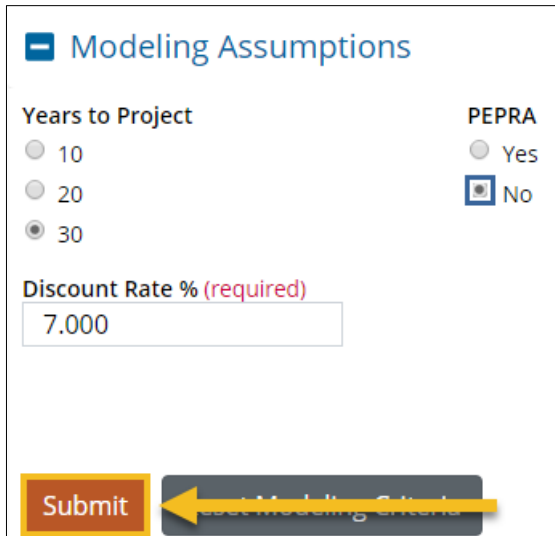
To turn off PEPRA Transition Period, follow the steps below:

1. Click the **No** radio button in the PEPRA section



The screenshot shows the 'Modeling Assumptions' section of a web form. It includes a 'Years to Project' section with radio buttons for 10, 20, and 30. A yellow arrow points from the '30' option to the 'PEPRA' section. The 'PEPRA' section has two radio buttons: 'Yes' and 'No'. The 'No' radio button is selected and highlighted with a yellow box. Below this is a 'Discount Rate % (required)' field with the value '7.000'. At the bottom are two buttons: 'Submit' (orange) and 'Reset Modeling Criteria' (grey).

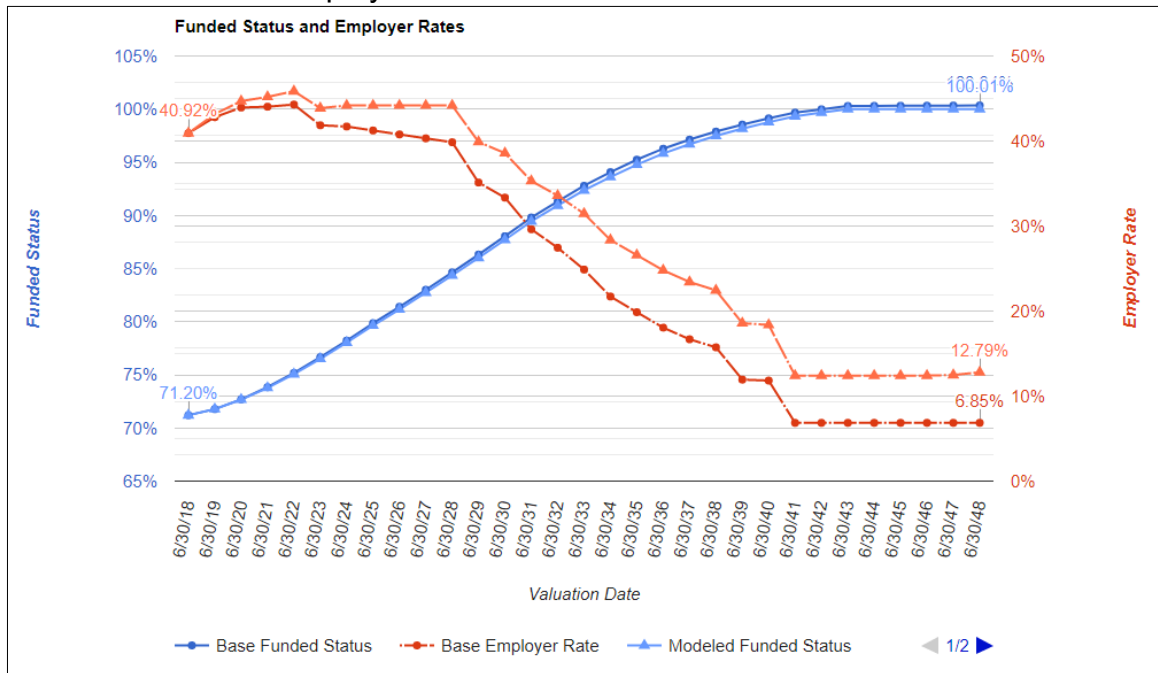
2. Click the **Submit** button



This screenshot shows the same 'Modeling Assumptions' form as the previous one. The 'PEPRA' section still has the 'No' radio button selected. A yellow arrow points from the 'Submit' button (orange) to the 'Reset Modeling Criteria' button (grey).

Turning Off PEPRA Transition (Cont.)

3. The desired results display

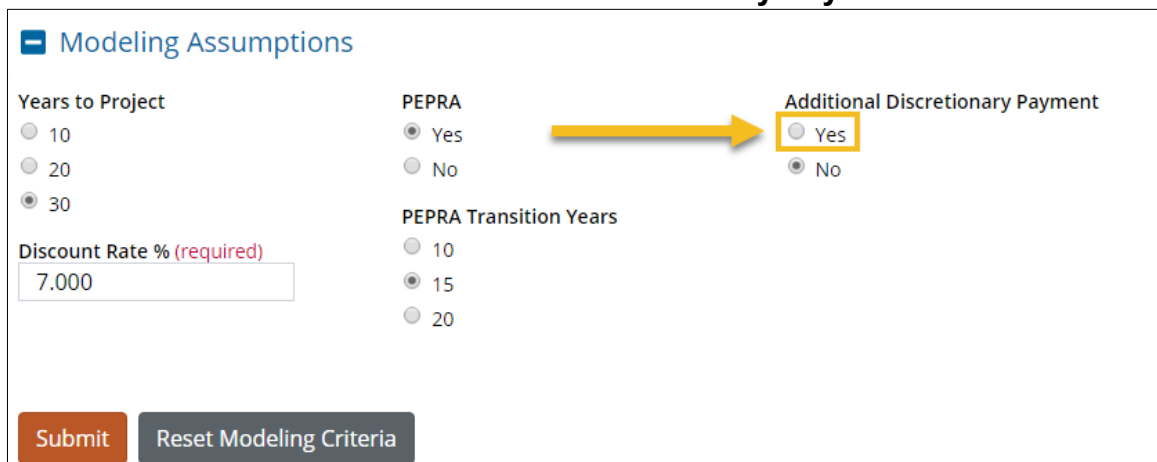


Additional Discretionary Payments (ADP's)

Users can model ADP's using the Pension Outlook tool. For an Agency with multiple plans, the same ADP's will be included in each plan on the Budget download. These ADP's are assumed to be made in the middle of the fiscal year (i.e. January 1st), and are applied to the amortization base with the longest period. More precise rate impacts with exact payments dates and applications to different amortization bases can be determined using the Managing Employer Contributions spreadsheet available from the Actuarial Office.

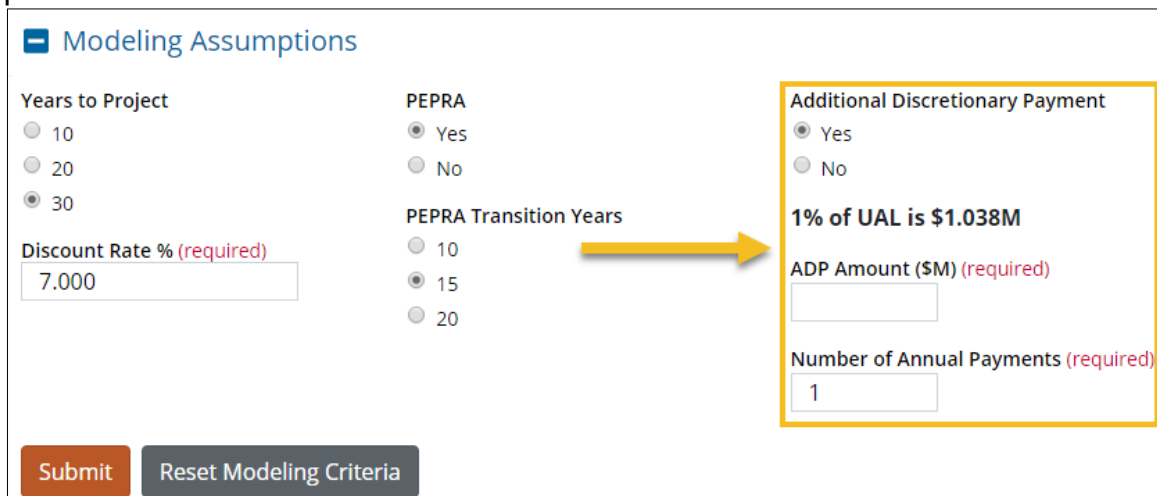
To model an ADP, perform the steps below:

1. Select the Yes button in the **Additional Discretionary Payment** section



The screenshot shows the 'Modeling Assumptions' form. On the right side, under the heading 'Additional Discretionary Payment', there are two radio buttons: 'Yes' and 'No'. The 'Yes' radio button is selected and highlighted with a yellow box. A yellow arrow points from the 'PEPRA' section towards this box. Other sections visible include 'Years to Project' (with 30 selected), 'Discount Rate % (required)' (with 7.000 entered), 'PEPRA' (with 'Yes' selected), and 'PEPRA Transition Years' (with 15 selected). At the bottom are 'Submit' and 'Reset Modeling Criteria' buttons.

2. Additional fields appear with 1% of Unfunded Actuarial Liability (UAL) for the plan for reference.



This screenshot shows the same 'Modeling Assumptions' form as above, but with additional fields visible on the right side, all enclosed in a yellow box. These fields are: '1% of UAL is \$1.038M', 'ADP Amount (\$M) (required)' (with an empty text box), and 'Number of Annual Payments (required)' (with '1' entered). A yellow arrow points from the 'PEPRA Transition Years' section towards this box. The 'Additional Discretionary Payment' section now shows 'Yes' as the selected option. The 'Submit' and 'Reset Modeling Criteria' buttons remain at the bottom.

Additional Discretionary Payment (Cont.)

3. Enter the amount of the anticipated ADP in \$ Millions (e.g. \$1.2 will give an ADP of \$1,200,000) and the number of annual payments desired.

Modeling Assumptions

Years to Project

☐ 10
☐ 20
☒ 30

Discount Rate % (required)

7.000

PEPRA

☒ Yes
☐ No

PEPRA Transition Years

☐ 10
☒ 15
☐ 20

Additional Discretionary Payment

☒ Yes
☐ No

1% of UAL is \$1.038M

ADP Amount (\$M) (required)

1.200

Number of Annual Payments (required)

2

Submit

Reset Modeling Criteria

4. Click the **Submit** button

Modeling Assumptions

Years to Project

☐ 10
☐ 20
☒ 30

Discount Rate % (required)

7.000

PEPRA

☒ Yes
☐ No

PEPRA Transition Years

☐ 10
☒ 15
☐ 20

Additional Discretionary Payment

☒ Yes
☐ No

1% of UAL is \$1.038M

ADP Amount (\$M) (required)

1.200

Number of Annual Payments (required)

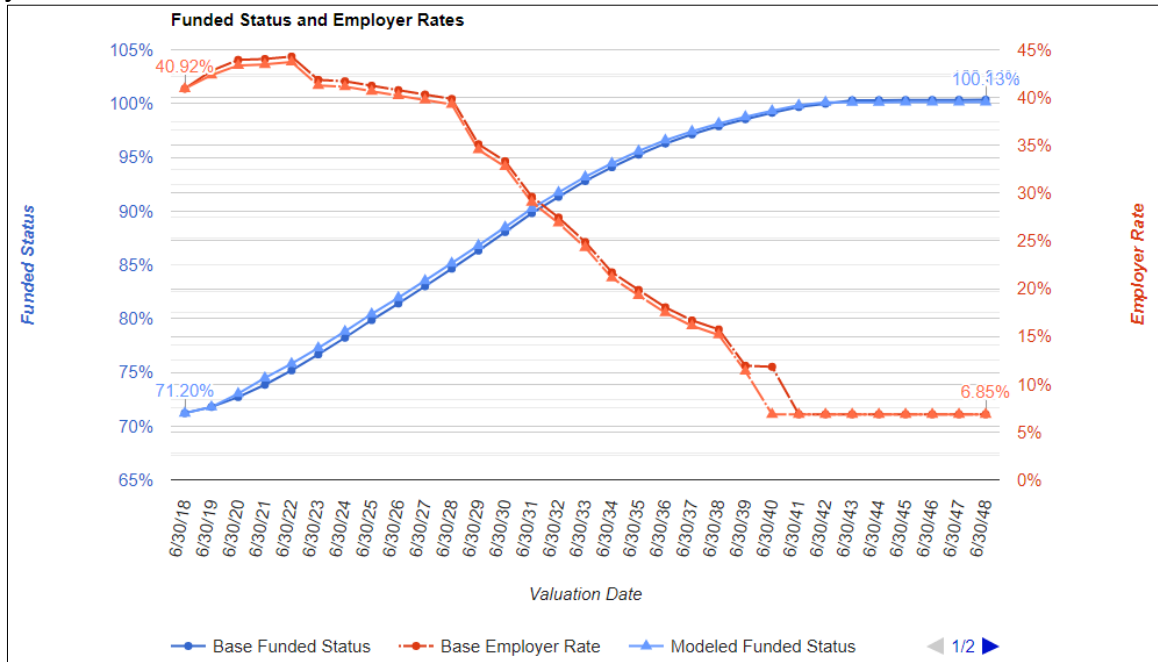
2

Submit

Reset Modeling Criteria

Additional Discretionary Payment (Cont.)

- The desired results display with an ADP of \$1.2M for each of the next 2 years



Investment Scenarios

Users can model future investment scenarios by selecting pre-loaded random scenarios provided for the most recent 2017 Asset Liability Management (ALM) Workshop, or by entering an investment scenario of their own choosing.

If a User selects a random scenario, the User will have the option of selecting a random scenario grouped by percentiles. For example, someone looking for a slightly pessimistic scenario might select from the 25-50% percentile. For a slightly optimistic scenario the User should select from the 50-75% percentiles. Note that the number of the random scenario generated will be provided on the summary for future reference.

If the User is interested in entering their own investment scenario, the User will enter the investment return and the associated period in the Investment table. For example, entering 6.70% for 1 year replicates the actual investment return for fiscal year 2018-19. The total number of years in this section will default to the length of the chosen projected period.

Selecting a Random Investment Scenario

To select a Random Investment Scenario, follow the steps below:

1. Click the **Yes** radio button in the Random Investment Scenario section

Random Investment Scenario	
<input type="radio"/> Yes	<input checked="" type="radio"/> No
Rate % (required)	Number of Years (required)
<input type="text" value="7.000"/>	<input type="text" value="1"/>
<input type="text" value="7.000"/>	<input type="text" value="9"/>
<input type="text" value="7.000"/>	<input type="text" value="20"/>

Selecting a Random Investment Scenario (Cont.)

2. Additional selections appear in the Random Investment Scenario section

Random Investment Scenario
☒ Yes
☐ No
Generate New Random Scenario ☒
Percentile
☐ 75-100%
☐ 50-75%
☒ 25-50%
☐ 0-25%

3. Make selections as desired

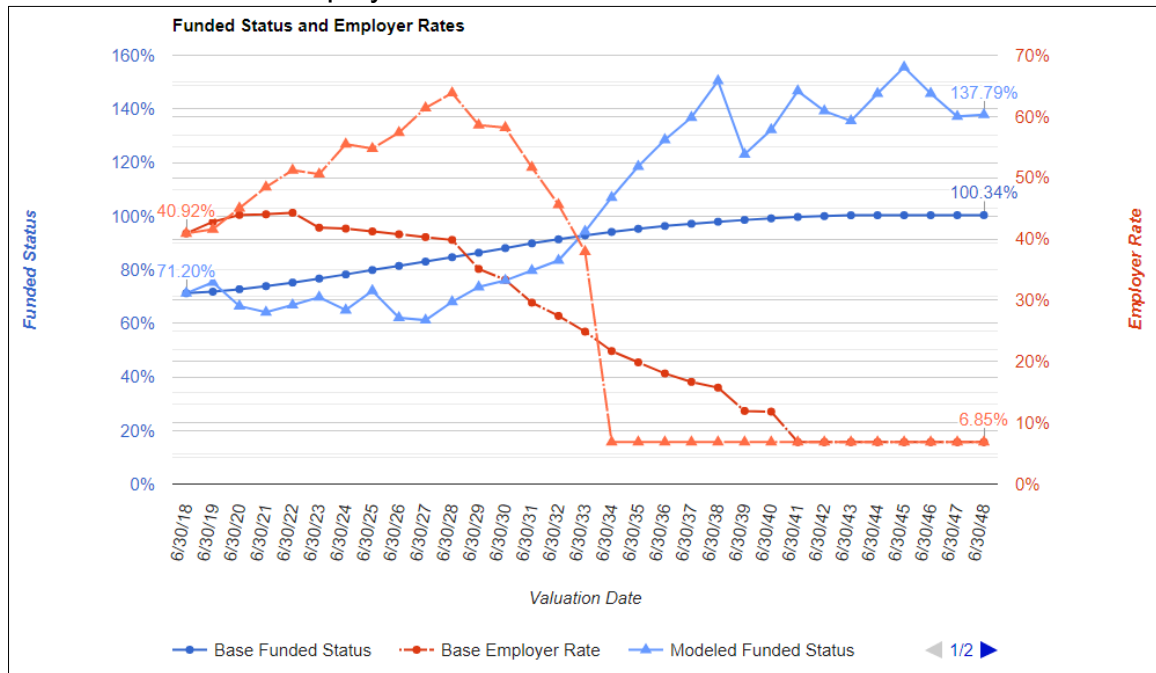
4. Click the **Submit** button

Modeling Assumptions

Years to Project <input type="radio"/> 10 <input type="radio"/> 20 <input checked="" type="radio"/> 30	PEPRA <input checked="" type="radio"/> Yes <input type="radio"/> No PEPRA Transition Years <input type="radio"/> 10 <input checked="" type="radio"/> 15 <input type="radio"/> 20	Additional Discretionary Payment <input type="radio"/> Yes <input checked="" type="radio"/> No	Random Investment Scenario <input checked="" type="radio"/> Yes <input type="radio"/> No Generate New Random Scenario <input checked="" type="checkbox"/> Percentile <input type="radio"/> 75-100% <input type="radio"/> 50-75% <input checked="" type="radio"/> 25-50% <input type="radio"/> 0-25%
--	--	---	--

Selecting a Random Investment Scenario (Cont.)

5. The desired results display



Entering a User Specified Investment Scenario

To enter a User Specified Investment Scenario, follow the steps below:

1. Verify the **No** radio button is selected in the Random Investment Scenario section

Random Investment Scenario

☐ Yes

☒ No

Rate % (required)	Number of Years (required)
7.000	1
7.000	9
7.000	20

2. Enter desired **Rate(s)** and **Year(s)**

Random Investment Scenario

☐ Yes

☒ No

Rate % (required)	Number of Years (required)
6.7	1
7.000	9
7.000	20

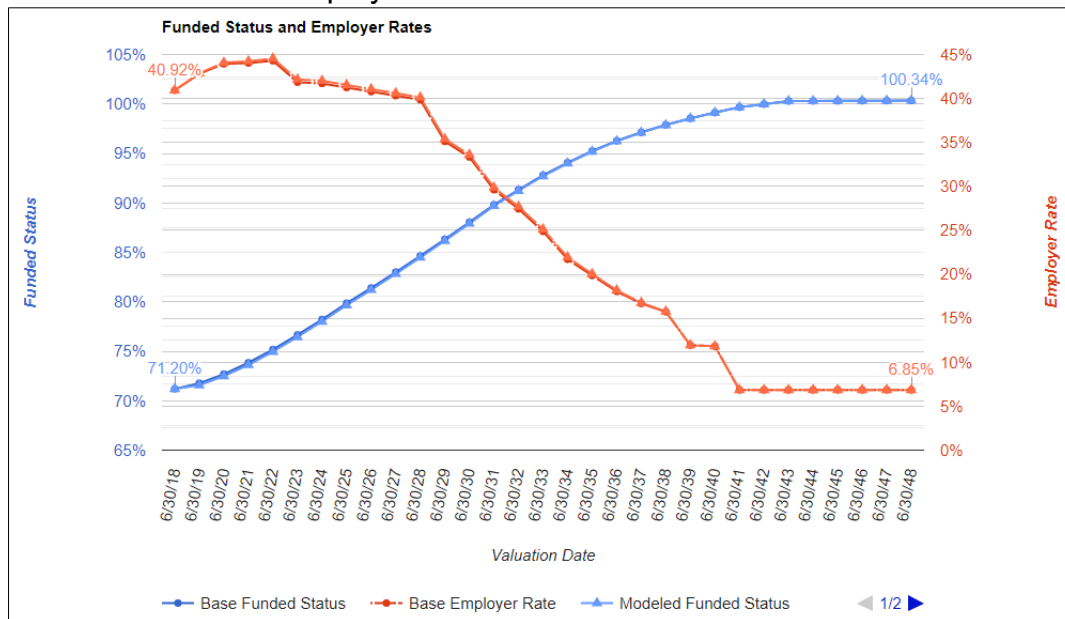
3. Click the **Submit** button

Modeling Assumptions

Years to Project <input type="radio"/> 10 <input type="radio"/> 20 <input checked="" type="radio"/> 30	PEPRA <input checked="" type="radio"/> Yes <input type="radio"/> No	Additional Discretionary Payment <input type="radio"/> Yes <input checked="" type="radio"/> No	Random Investment Scenario <input type="radio"/> Yes <input checked="" type="radio"/> No								
Discount Rate % (required) 7.000	PEPRA Transition Years <input type="radio"/> 10 <input checked="" type="radio"/> 15 <input type="radio"/> 20		<table><thead><tr><th>Rate % (required)</th><th>Number of Years (required)</th></tr></thead><tbody><tr><td>6.7</td><td>1</td></tr><tr><td>7.000</td><td>9</td></tr><tr><td>7.000</td><td>20</td></tr></tbody></table>	Rate % (required)	Number of Years (required)	6.7	1	7.000	9	7.000	20
Rate % (required)	Number of Years (required)										
6.7	1										
7.000	9										
7.000	20										

Submit **Reset Modeling Criteria**

4. The desired results display

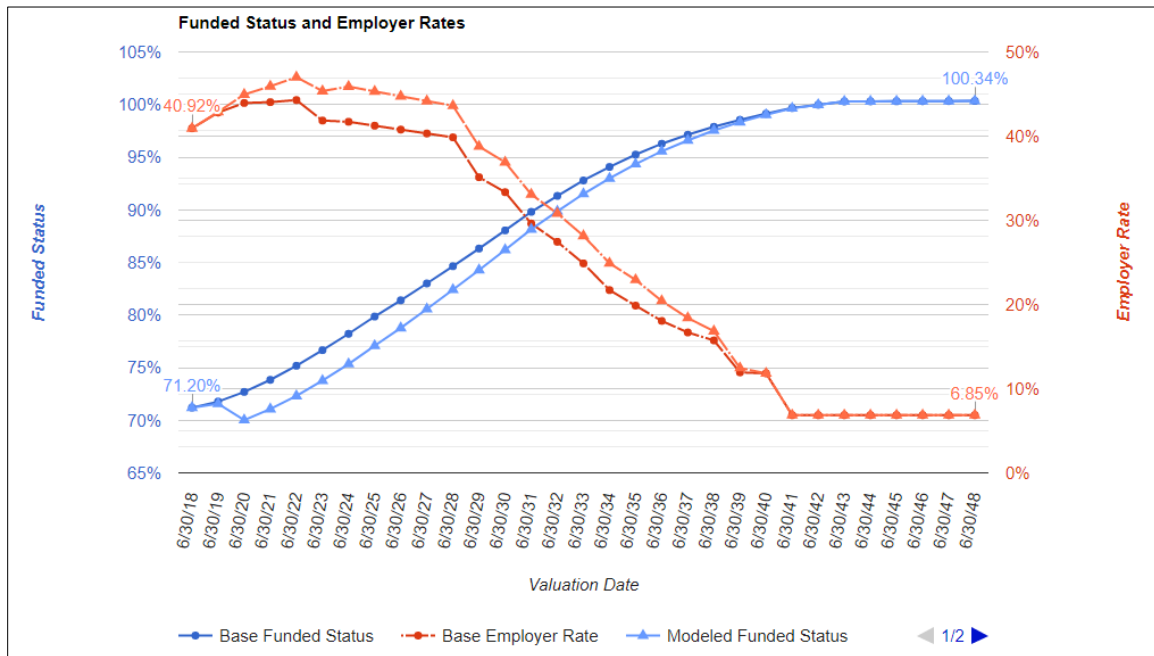


Submit Button

Once the User is satisfied with their financial scenario they should select the submit button on the modeling assumptions section to proceed to the Summary results of the chosen scenario.

Summary Results

The Summary Results provide graphic projections of the Plan's Funded Status and the Employer Contribution rate under the Baseline assumptions and the modelled scenario for the Projection Period selected.



Key cost metrics are also displayed on this screen. See next page for more details.

Key cost metrics include:

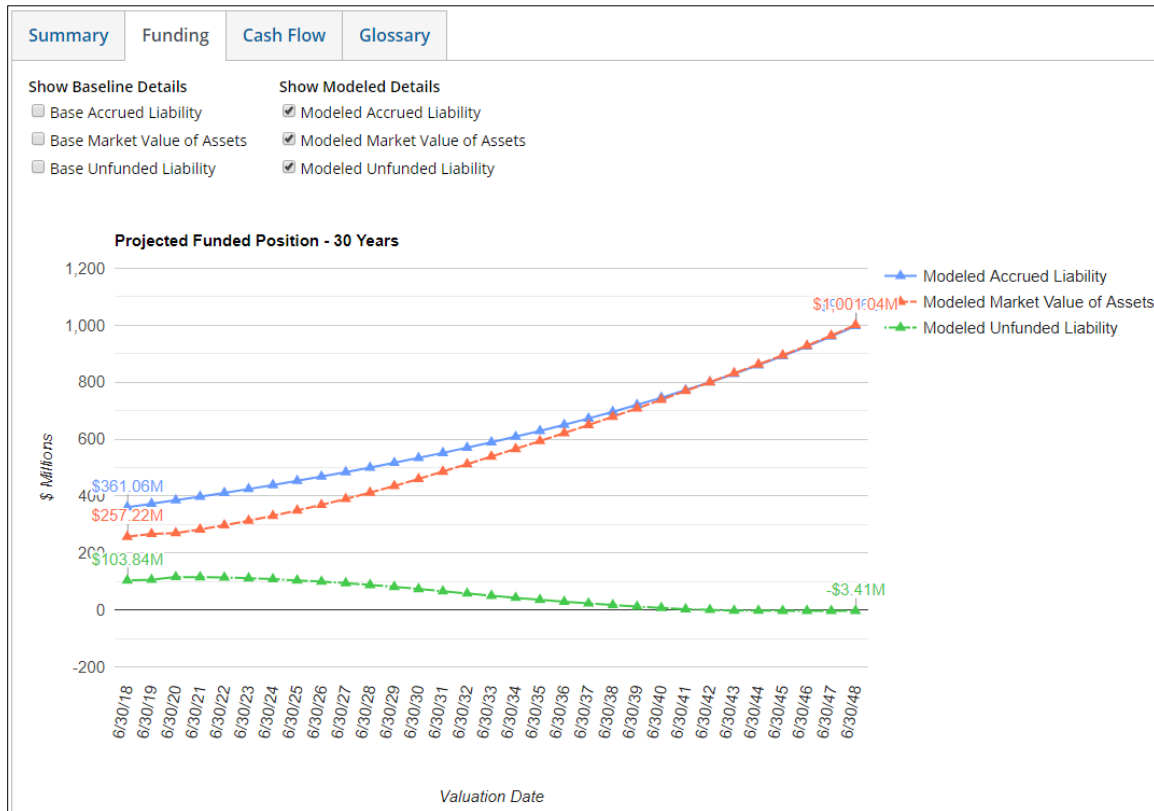
1. Cost Over the Projected Period (e.g. 30 Years)
2. Future Funded Status (including 3, 5 and 10 years into the future)
3. Employer Rates (average and maximum over projected period)
4. Plan Cost Diagnostics (comparisons to current and baseline)

Cost Over 30 Years (\$M)		1	Funded Status		Future Funded Status		2
Details	Amount		Details	Percentage	Date	Percentage	
Baseline	\$298.16		Current at 06/30/2018	71.20%	at 06/30/2022	72.31%	
Scenario	\$320.09		Projected at 06/30/2019	71.57%	at 06/30/2024	75.35%	
Change	\$21.93		Lowest Funded Status	70.02%	at 06/30/2029	84.28%	
Increase/ Decrease	7.35%						

Employer Rates		3	Plan Cost Diagnostics		4
Details	Percentage		Rate	Average	
Current FY (at 06/30/2019)	36.74%		Average Rate Relative to Current Rate	-23.54%	
Projected for next FY (at 06/30/2020)	40.92%		Maximum Rate Relative to Current Rate	27.93%	
Average Over 30 Years	28.09%		Average Rate Relative to Baseline	7.17%	
Increase Over Baseline Over 30 Years	1.88%		Maximum Rate Relative to Baseline	6.13%	
Maximum Over 30 Years	47.00%		Cost Over 30 Years Relative to Baseline	7.35%	
Increase Over Baseline Over 30 Years	2.72%				

Funding Results

This Tab provides graphic projections of the accrued liabilities (AL), market value of assets (MVA) and the unfunded actuarial liability (UAL). The User can select the results they would like to display on the graph by choosing between the baseline results and/or the modeled scenario for the AL, MVA and UAL.



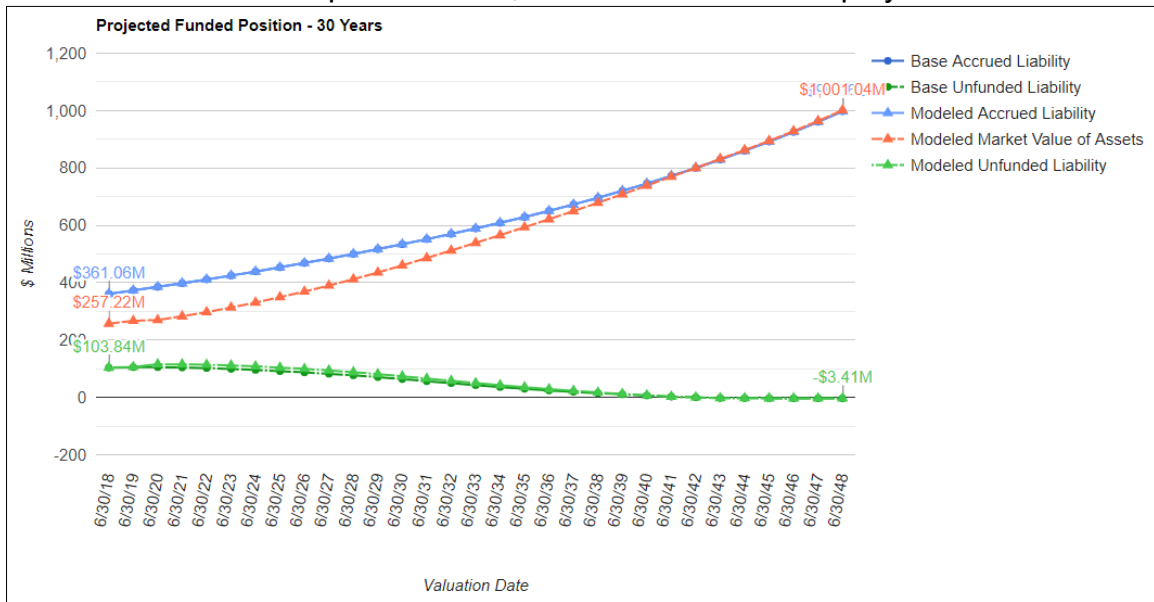
To change the results that are displayed, follow the steps below:

1. Select the checkboxes next to the desired details

Show Baseline Details	Show Modeled Details
<input checked="" type="checkbox"/> Base Accrued Liability	<input checked="" type="checkbox"/> Modeled Accrued Liability
<input type="checkbox"/> Base Market Value of Assets	<input checked="" type="checkbox"/> Modeled Market Value of Assets
<input checked="" type="checkbox"/> Base Unfunded Liability	<input checked="" type="checkbox"/> Modeled Unfunded Liability

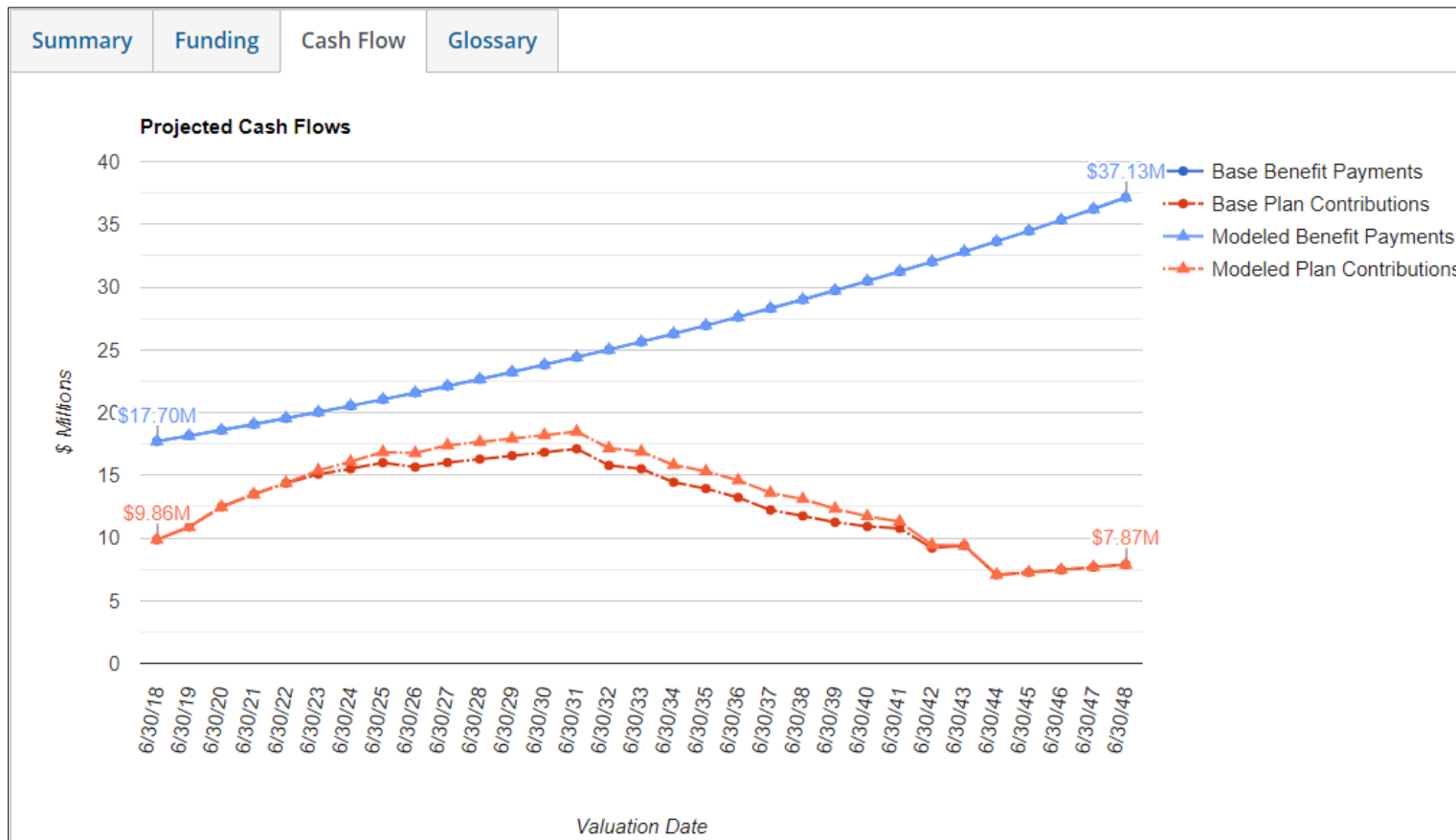
Changing Displayed Funding Results (Cont.)

3. Click outside of the dropdown menu, the desired results display



Cash Flow Results

This Tab provides projections of the benefit payments (based on the most recent valuation report) and employer contributions based on the baseline and modeled scenario.



Budgeting Results

This section contains year by year projections of the Employer Costs using the Baseline assumptions and any modeled scenarios. These results are provided for each plan that the Employer has along with the combined results of all the plans (if applicable). Annual relative increases in cost are provided in the tables along with an impact on costs in comparison with the Baseline projections based on the modeled scenario.

There is a download link that allows the User to download a Microsoft Excel spreadsheet that contains the 30 years of projected cost information, plan assets, liabilities and funded status.

Modeling Assumptions								
Economic Assumptions			Investment Scenario Chosen		Other Assumptions			
Details	Baseline	Model	Rate	Period	Details	Baseline	Model	
Discount Rate	7.000%	7.000%	6.700%	1	PEPRA	Yes	Yes	
Payroll Growth	2.750%	2.750%	3.400%	1	Transition Years	15	15	
Inflation Rate	2.500%	2.500%	7.000%	28	ADP	No	No	
30 Year Budget								
Download the Fiscal Year Cost and Annual Relative Increase in Cost								

Microsoft Excel Spreadsheet

The Microsoft Excel spreadsheet contains the following on separate worksheets:

- 1. Terms of Use
- 2. Assumptions
- 3. Plan Results
- 4. Combined Results

1	2	3		4
Terms of Use	Assumptions	374-Miscellaneous Plan	375-Safety Plan	Combined

Appendix 1 – Terms and Condition of Use

Upon registering for a Pension Outlook account, users must agree to the following terms and conditions before gaining access to the tool:

Terms and Conditions of Use

Use of the model is subject to acceptance of these Terms and Conditions of Use.

The model is intended to be used solely for informational purposes. The hypothetical projections presented by the model are not intended to be actual estimates of future contribution rates or investment growth. Plan contribution rates and funded status will be based on actual experience, which may significantly differ from the hypothetical projections calculated using the model.

Hypothetical projections of plan results obtained using the model are based on the information contained in the plan's most recent valuation report, the assumptions used therein, and the information that you input into the model. The model will not automatically incorporate adjustments to the discount rate required under the CalPERS Funding Risk Mitigation Policy, which generally requires a reduction in the discount rate if CalPERS investment performance significantly outperforms the current discount rate.

The actuarial calculations performed by the model are based on a number of assumptions about very long-term demographic and economic behavior. Unless these assumptions (e.g., termination, death, disability, retirement, salary growth, and investment return) are exactly realized each year, there will be differences between the hypothetical projections obtained using the model and your plan's actual required contribution rate and funded status on a year-to-year basis.

These year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise contribution rates from one year to the next. Actual contribution rates will inevitably fluctuate over time and may vary significantly from the hypothetical projections you obtained using the model.

Nothing contained herein or in the model is intended to constitute financial advice. CalPERS is not responsible for any hypothetical projections obtained using the model or any decisions or actions taken in reliance upon such projections. CalPERS disclaims any and all liability for misrepresentations regarding the accuracy of the hypothetical projections obtained using the model. CalPERS does not guarantee the accuracy of any of the hypothetical projections obtained using the model.

By accepting below, I acknowledge that I have read, understand, and agree to, these Terms and Conditions of Use.

Terms and Conditions of Use (Cont.)

Terms and conditions can be accessed in Pension Outlook by clicking on the Terms and Conditions hyperlink:

